

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Canceled):

Claim 24 (New): A process for producing an aqueous dispersion comprising dispersing with high shear energy a silicon-aluminium mixed oxide powder in an aqueous medium, the particles of said silicon-aluminium mixed oxide powder comprising from 0.1 to 99.9 wt.%  $\text{Al}_2\text{O}_3$  and possessing a structure containing Si-O-Al- bonds and at least one selected from the group consisting of amorphous silicon dioxide regions, crystalline silicon dioxide regions, and combinations of amorphous and crystalline silicon dioxide regions, and crystalline aluminium oxide regions, said silicon-aluminum mixed oxide powder being selected from the group consisting of

- (1) a powder containing primary particles of amorphous silicon dioxide and crystalline aluminium oxide obtained from a flame hydrolysis process,
  - (2) a powder containing a mullite structure having the chemical composition  $3 \text{ Al}_2\text{O}_3 \times 2 \text{ SiO}_2$  up to  $2 \text{ Al}_2\text{O}_3 \times \text{SiO}_2$ ,
  - (3) a powder containing aluminium oxide doped with silicon dioxide or silicon dioxide obtained from a flame hydrolysis process and doped with aluminium oxide,
- and
- (4) a powder containing an aluminium oxide powder completely or partially coated with silicon dioxide or silicon dioxide powder completely or partially coated with aluminium oxide,
- wherein the energy input for the dispersion operation is at least  $200 \text{ KJ/m}^3$ .

Claim 25 (New): The process for producing the aqueous dispersion according to claim 24, wherein the silicon-aluminum mixed oxide is dispersed and ground by pressurizing and releasing one or more aqueous dispersions of the silicon-aluminum mixed oxide through a nozzle of a device to cause the one or more aqueous dispersions to collide with one another or a section of a wall of the device.

Claim 26 (New): The process of preparing an aqueous dispersion according to claim 24, wherein the specific surface area of the powder is between 5 and 300 m<sup>2</sup>/g.

Claim 27 (New): An aqueous dispersion comprising a silicon-aluminium mixed oxide powder, wherein the particles of said silicon-aluminium mixed oxide powder comprise from 0.1 to 99.9 wt.% Al<sub>2</sub>O<sub>3</sub> and possess a structure containing Si-O-Al- bonds and at least one selected from the group consisting of amorphous silicon dioxide regions, crystalline silicon dioxide regions, and combinations of amorphous and crystalline silicon dioxide regions, and crystalline aluminium oxide regions, said silicon-aluminum mixed oxide powder being selected from the group consisting of

- (1) a powder containing primary particles of amorphous silicon dioxide and crystalline aluminium oxide obtained from a flame hydrolysis process,
  - (4) a powder containing a mullite structure having the chemical composition  $3 \text{ Al}_2\text{O}_3 \times 2 \text{ SiO}_2$  up to  $2 \text{ Al}_2\text{O}_3 \times \text{SiO}_2$ ,
  - (5) a powder containing aluminium oxide doped with silicon dioxide or silicon dioxide obtained from a flame hydrolysis process and doped with aluminium oxide,
- and

(4) a powder containing an aluminium oxide powder completely or partially coated with silicon dioxide or silicon dioxide powder completely or partially coated with aluminium oxide,  
the aqueous dispersion having been produced by dispersing the silicon-aluminum mixed oxide in an aqueous medium with an energy input of at least 200 KJ/m<sup>3</sup>.

Claim 28 (New): The aqueous dispersion according to claim 27, wherein the powder contains primary particles of amorphous silicon dioxide and crystalline aluminium oxide obtained from a flame hydrolysis process.

Claim 29 (New): The aqueous dispersion according to claim 27, wherein the silicon-aluminium mixed oxide powder contains a mullite structure having the chemical composition  $3 \text{ Al}_2\text{O}_3 \times 2 \text{ SiO}_2$  up to  $2 \text{ Al}_2\text{O}_3 \times \text{SiO}_2$ .

Claim 30 (New): The aqueous dispersion according to claim 27, containing aluminium oxide doped with silicon dioxide or silicon dioxide obtained from a flame hydrolysis process and doped with aluminium oxide.

Claim 31 (New): The aqueous dispersion according to claim 27, containing aluminium oxide powder completely or partially coated with silicon dioxide or silicon dioxide powder completely or partially coated with aluminium oxide.

Claim 32 (New): The aqueous dispersion according to claim 27, wherein the crystalline aluminium oxide regions comprise crystalline aluminum oxide selected from the group consisting of alpha aluminium oxide, gamma-aluminium oxide, delta-aluminium oxide,

theta-aluminium oxide, kappa-aluminium oxide, pyrogenically produced aluminium oxide and mixtures thereof.

Claim 33 (New): The aqueous dispersion according to claim 27, wherein the solids content in the dispersion is between 0.1 and 70 wt.%.

Claim 34 (New): The aqueous dispersion according to claim 27, wherein the pH value of the dispersion is between 4 and 12.5.

Claim 35 (New): The aqueous dispersion according to claim 27, further comprising an oxidising agent selected from the group consisting of hydrogen peroxide, hydrogen peroxide adducts, organic peracids, inorganic peracids, imino peracids, persulfates, perborates, percarbonates, oxidising metal salts and mixtures thereof.

Claim 36 (New): The aqueous dispersion according to claim 27, further comprising an oxidation activator selected from the group consisting of metal salts of Ag, Co, Cr, Cu, Fe, Mo, Mn, Ni, Os, Pd, Ru, Sn, Ti, V, carboxylic acids, nitriles, ureas, amides, esters and mixtures thereof.

Claim 37 (New): The aqueous dispersion according to claim 27, further comprising a corrosion inhibitor selected from the group consisting of benzotriazoles, substituted benzimidazoles, substituted pyrazines, substituted pyrazoles and mixtures thereof.

Claim 38 (New): The aqueous dispersion according to claim 27, further comprising non-ionic amphoteric surface-active substances, cationic amphoteric surface-active

substances, anionic amphoteric surface-active substances, amphoteric surface-active substances and mixtures thereof.

Claim 39 (New): A process for chemical mechanical polishing a surface, said process comprising  
polishing said surface with the aqueous dispersion claimed in claim 27.

Claim 40 (New): The process as claimed in claim 39, wherein the surface is an oxide surface.

Claim 41 (New): A process for chemical mechanical polishing a metal coating, said process comprising  
polishing said metal coating with the aqueous dispersion claimed in claim 27.

Claim 42 (New): The process as claimed in claim 41, wherein the metal coating is selected from the group consisting of aluminum, aluminum alloys, copper, copper alloys, tungsten, titanium and titanium nitride.

Claim 43 (New): A surface coating comprising the aqueous dispersion claimed in claim 27.

Claim 44 (New): A process for producing a surface coating, said process comprising incorporating the aqueous dispersion claimed in claim 27 in said surface coating.

Claim 45 (New): An aqueous dispersion comprising silicon-aluminum mixed oxide powder according to claim 27 having an average particle size of less than 150 nm.

Claim 46 (New): An aqueous silicon-aluminum mixed oxide powder according to claim 45 having an average particle size of less than 100 nm.